IN THE CLAIMS:

Claims 1-36 (Cancelled)

37. (Previously presented) A direct oxidation fuel cell, comprising

(A) a catalyzed membrane electrolyte, having an anode aspect and a cathode aspect;

(B) a fuel cell housing enclosing said fuel cell with an anode chamber being defined between said anode aspect of the catalyzed membrane electrolyte and an exterior portion of said cell housing;

(C) a direct fuel feed into an anode chamber that has no liquid exit port such that liquid that is present in said anode chamber cannot exit said anode chamber except across said catalyzed membrane electrolyte;

(D) at least one gaseous effluent release port located in said anode chamber in close proximity to said anode aspect of the catalyzed membrane electrolyte; and

(E) a load coupled across said fuel cell, providing a path for electrons produced in electricity generating reactions of said fuel cell.

38. (Previously presented) The direct oxidation fuel cell as defined in claim 37 wherein a substance delivered by said direct fuel feed into said liquid-closed volume in the anode chamber is up to 100% fuel.

39. (Previously presented) The direct oxidation fuel cell as defined in claim 38 wherein said fuel is methanol.

40. (Previously presented) The direct oxidation fuel cell as defined in claim 37 wherein fuel is delivered by said direct fuel feed into said anode chamber without anode liquid recirculation.

41. (Previously presented) The direct oxidation fuel cell as defined in claim 37 wherein water produced at said cathode is not actively collected or pumped to said anode chamber.

42. (Previously presented) The direct oxidation fuel cell wherein gaseous effluent traveling out of said fuel cell through said gaseous effluent release port is at least partially comprised of carbon dioxide.

43. (Previously presented) The direct oxidation fuel cell as defined in claim 37 wherein at least a portion of one wall of said anode chamber is gas permeable and liquid impermeable.

44. (Previously presented) A direct oxidation fuel cell, comprising:

(A) a catalyzed membrane electrolyte having an anode aspect and a cathode aspect;

(B) a fuel cell housing with an anode chamber being defined between said anode aspect of said catalyzed membrane electrolyte and an exterior portion of said cell housing, and fuel being delivered to, but not actively recirculated from, said anode chamber; and

(C) gaseous anodic product removal component disposed between said catalyzed membrane electrolyte and said housing.

45. (Previously presented) A direct oxidation fuel cell system, comprising:

(A) a direct oxidation fuel cell having:

(i) a catalyzed membrane electrolyte, having an anode aspect and a cathode aspect;

(ii) a fuel cell housing enclosing said fuel cell with an anode chamber being defined between said anode aspect of the catalyzed membrane electrolyte and an exterior portion of said cell housing;

(iii) a direct fuel feed into a liquid-closed volume in said anode chamber such that liquid fuel that enters into the chamber by the direct fuel feed cannot exit the chamber except across said catalyzed membrane electrolyte; and

(iv) at least one gaseous effluent release port located in said anode chamber in close proximity to said anode aspect of the catalyzed membrane electrolyte;

(B) a fuel source coupled to said anode chamber; and

(C) means by which current can be collected from the fuel cell and conducted to a load, whereby electricity is generated by said fuel cell as fuel is delivered to said anode chamber without external pumping of cathodically-generated water and without active water removal elements.

46. (Previously presented) A direct oxidation fuel cell, comprising:

(A) a catalyzed membrane electrolyte assembly having an anode aspect and a cathode aspect and

(B) means for outporting gasses away from the anode aspect of the fuel cell which means for outporting gasses is disposed in close proximity to said anode aspect of the catalyzed membrane electrolyte assembly.

47. (Withdrawn) A gas management component for use in a direct oxidation fuel cell having a catalyzed membrane electrolyte with an anode aspect and a cathode aspect, comprising:

an element substantially comprised of a gas-permeable, liquid-impermeable material, which element is disposed in close proximity to the anode aspect of the catalyzed membrane electrolyte assembly.

48. (Withdrawn) The gas management component as defined in claim 47 wherein said material is gas-selective in such a manner that it is permeable to anodic effluent gas, but is substantially less permeable to oxygen.

49. (Withdrawn) The gas management component as defined in claim 47 wherein said gas management component is made part of a flow field element, providing said flow field element with gas releasing properties while effectively delivering fuel to active area of the membrane electrolyte. .

50. (Withdrawn) The gas management component as defined in claim 49 wherein fuel is delivered to said active area of the membrane electrolyte through an associated anodic diffusion layer.

51. (Withdrawn) The gas management component as defined in claim 49 wherein said flow fields encourage removal of anodically-generated gasses such that they are released from the direct oxidation fuel cell prior to excessive collection of gaseous anodic product within the said anode chamber in said fuel cell.

52. (Withdrawn) The gas management component as defined in claim 47 wherein said gas management component is disposed within said fuel cell in such a manner that anodically-generated gasses are released prior to coalescing and impeding the flow of fuel from an associated fuel source into said anode chamber.

53. (Withdrawn) A membrane electrode assembly of a direct oxidation fuel cell, comprising:

(A) a protonically-conductive, electronically non-conductive catalyzed membrane electrolyte;

(B) a catalyst disposed on said membrane electrolyte;

(C) an anode diffusion layer disposed contiguous to an anode aspect of the membrane electrolyte;

(D) a cathode diffusion layer disposed contiguous to a cathode aspect of the membrane electrolyte; and

(E) a gas-permeable, liquid-impermeable layer coupled to, or in close proximity with said anode diffusion layer.

54. (Withdrawn) The membrane electrode assembly as defined in claim 53 wherein said gas-permeable, liquid-impermeable layer is mechanically attached or bonded to said anode diffusion layer.

55. (Previously presented) A direct oxidation fuel cell comprising:

(A) a membrane electrode assembly, including:

(i) a protonically-conductive, electronically non-conductive catalyzed membrane electrolyte;

(ii) a catalyst disposed on said membrane electrolyte;

(iii) an anode diffusion layer disposed contiguous to an anode aspect of the membrane electrolyte;

(iv) a cathode diffusion layer disposed contiguous to a cathode aspect of the membrane electrolyte; and

(B) a gas-permeable, liquid-impermeable layer coupled to said anode diffusion layer; and

(C) a coupling across said fuel cell to conduct electricity generated by said fuel cell to an associated load; and

(D) a fuel cell housing substantially enclosing said fuel cell.

56. (Previously presented) A direct oxidation fuel cell system, comprising:

(A) a fuel source;

(B) a direct oxidation fuel cell including:

(i) a protonically-conductive, electronically non-conductive catalyzed membrane electrolyte;

(ii) a catalyst disposed on said membrane electrolyte;

(iii) an anode diffusion layer disposed contiguous to the anode aspect of the membrane electrolyte;

(iv) a cathode diffusion layer disposed contiguous to the cathode aspect of the membrane electrolyte; and

(v) a gas-permeable, liquid-impermeable layer coupled to said anode diffusion layer; and

(vi) a coupling across said fuel cell to conduct electricity generated by said fuel cell to an associated load.

57. (Currently Amended) The direct oxidation fuel cell system as defined in claim 56 wherein the fuel is up to 100~~1~~% fuel.

58. (Previously presented) The direct oxidation fuel cell system as defined in claim 57 wherein said fuel is methanol.

59. (Withdrawn) A method of managing anodic effluent in a direct oxidation fuel cell, said fuel cell having a catalyzed membrane electrolyte with an anode aspect and a cathode aspect, the method including the step of:

removing gaseous anodic effluent from a liquid by providing a gas management component comprised substantially of a gas-permeable, liquid-impermeable layer disposed in close proximity to the anode aspect of the direct oxidation fuel cell.

60. (Withdrawn) The method, as defined in claim 59, including providing said gas-permeable, liquid-impermeable layer in contact with the anode aspect of the membrane electrolyte assembly.

61. (Withdrawn) A method of separating anodically-generated gasses in a direct oxidation fuel cell, said fuel cell having a catalyzed membrane electrolyte with an anode aspect and a cathode aspect, and an anode chamber being defined between said anode aspect and an exterior of said fuel cell, the method including the steps of:

separating said anodically-generated gasses from a fluid volume of fuel contained within said anode chamber of said fuel cell, without recirculating said volume of fuel.

62. (Previously presented) A direct oxidation fuel cell system, comprising:

(A) a fuel source;

(B) a direct oxidation fuel cell having a catalyzed membrane electrolyte with an anode aspect and a cathode aspect;

(C) a cell housing with an anode chamber defined between the anode aspect of the catalyzed membrane and one exterior portion of said cell housing, with said chamber having no exit port for liquid;

(D) an element disposed between said fuel source and said anode aspect of the direct oxidation fuel cell for controlling the delivery of fuel to the direct oxidation fuel cell system.

63. (Previously presented) The direct oxidation fuel cell system as defined in claim 62, wherein said element controls the delivery of fuel without pumps or active recirculation mechanisms.

64. (Withdrawn) The direct oxidation fuel cell system as defined in claim 62 wherein said fuel source is substantially entirely disposed within said fuel cell.

65. (Previously presented) The direct oxidation fuel cell system as defined in claim 62 wherein

said fuel source is disposed external to the fuel cell.

66. (Previously presented) The direct oxidation fuel cell system as defined in claim 62 wherein

a pressure differential exists between the fuel in the fuel source and the anode chamber of the fuel cell.

67. (Withdrawn) The direct oxidation fuel cell system as defined in claim 62 wherein said element for controlling fuel delivery includes a pump.

68. (Previously presented) The direct oxidation fuel cell system as defined in claim 62 wherein

said fuel source contains more than one liquid that may be mixed between the fuel source and the anode of the fuel cell.

69. (Previously presented) The direct oxidation fuel cell system as defined in claim 68 wherein

said fuel source contains methanol and water.

70. (Previously presented) The direct oxidation fuel cell system as defined in claim 62 wherein

said fuel source is capable of delivering up to 100% fuel to said fuel cell.

71. (Previously presented) The direct oxidation fuel cell system as defined in claim 70 wherein said fuel is methanol.

72. (Previously presented) The direct oxidation fuel cell system as defined in claim 62 wherein

delivery of said fuel is performed by suction.

73. (Previously presented) The direct oxidation fuel cell system as defined in claim 62 wherein

said delivery by suction is performed by the action of a capillary network in a porous component, which is disposed between said fuel source and said anode of said direct oxidation fuel cell.

74. (Withdrawn) A method of delivering fuel to a direct oxidation fuel cell comprising the steps of delivering fuel to the anode of the fuel cell in such a manner that the volume of fuel that has been consumed at the anode of the fuel cell is replaced by the same volume of fresh fuel or a fuel and water mixture delivered from a fuel source.

75. (Withdrawn) A method of controlling delivery of fuel to a direct oxidation fuel cell system wherein said fuel cell system includes a fuel source, a direct oxidation fuel cell having a catalyzed membrane electrolyte with an anode aspect and a cathode aspect and an anode chamber being defined between said anode aspect and an exterior portion of said direct oxidation fuel cell, said anode chamber not having a port by which liquid can exit the anode chamber, the method including the steps of:

providing a mass transport controlling element disposed between the anode aspect of the catalyzed membrane and said fuel source whereby fuel delivery to the fuel cell system is controlled without pumps or recirculation components.

76. (Withdrawn) The method as defined in claim 75 including the further step of disposing said fuel source entirely within said fuel cell.

77. (Withdrawn) The method as defined in claim 75 including the further step of disposing said fuel source external to the fuel cell.

78. (Withdrawn) The method as defined in claim 75 including the further step of placing fuel in said fuel source under a slight pressure to induce a pressure differential between the fuel in said fuel source and the fuel in the anode chamber of the fuel cell.

79. (Withdrawn) The method as defined in claim 75 including the further step of providing in said fuel source more than one liquid; and

mixing said liquids between the fuel source and the anode chamber of the fuel cell.

80. (Withdrawn) The method as defined in claim 79 wherein said liquids provided to said fuel source include methanol and water.

81. (Withdrawn) The method as defined in claim 75 including providing as said fuel, a substance of up to 100% methanol.

82. (Withdrawn) The method as defined in claim 81 wherein said fuel substance is methanol.

83. (Withdrawn) The method as defined in claim 75 including the further step of delivering said fuel to said anode chamber by suction.

84. (Withdrawn) The method as defined in claim 75 including the further step of delivering fuel from said fuel source to said anode by the suction action of a capillary network in a porous component that is disposed between said fuel source and said anode chamber of said direct oxidation fuel cell.